

Preliminary Amendment

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Applicant: Derek D. Smith et al.

Serial No.: unknown (parent: 09/070,504)

Title: PEPTIDE ANTAGONISTS OF CGRP-RECEPTOR SUPERFAMILY AND METHODS OF USE

A2
β-CGRP is the product of a separate gene (Amara et al. *Nature* 298:240-244, 1985 and Steenbergh et al. *FEBS Lett.* 183:403-407, 1982). The human β-form and α-form differ by three amino acids. --

✓
Please replace the paragraph beginning at page 1, line 27 with the following rewritten paragraph. Per 37 C.F.R. §1.121, this paragraph is also shown in Appendix A with notations to show the changes made.

A3
-- The release of CGRP from sensory nerve endings in inflammatory reactions can result in the local acceleration of microhemodynamic changes including vasodilation and permeability of the microcirculation resulting in plasma exudation and the release of humoral factors and inflammatory cells to the site of injury. CGRP has been used as a vasodilator in animal models of subarachnoid hemorrhage and in trials involving human subjects with congestive heart failure. CGRP administration produced hypotension associated with moderate tachycardia in hypertensive humans (Jian et al. *Chin. Med. J.* 102:897-901, 1989). CGRP has also been used as a potent dilator of the coronary circulation (Ezra et al., *Eur. J. Pharmacol.*, 1987). In contrast to nitrates, which have also been used as vasodilators, CGRP results in dilation by both endothelium-dependent and endothelium-independent mechanisms. Also, in contrast to nitrates, such as sodium nitroprusside, tolerance to CGRP has not been noted Bény et al. *Regul. Pept.* 25:25-36, 1989). CGRP has been demonstrated to improve the ability of patients to participate in exercise programs in patients with chronic stable angina (Uren et al. *Cardiovasc. Res.* 27:1477-1481, 1993). --

✓
Please replace the paragraph beginning at page 3, line 27 with the following rewritten paragraph. Per 37 C.F.R. §1.121, this paragraph is also shown in Appendix A with notations to show the changes made.

~~-- CGRP antagonists includes peptides from CGRP including amino acids 8-37 of β-CGRP (Park et al. *Am. J. Physiol.* 1989) having the amino acid sequence: THRLAGLLSRSGGMVKSNFVPTNVGSKAF (SEQ ID NO:1) and peptides from α-CGRP including amino acids 8-37 and having the amino acid sequence~~

A4

Preliminary Amendment

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A4
~~PHRLAGLLSRSGGMVKSNEFVVPTNVGSKAF. β -CGRP(8-37) (SEQ ID NO:2) has been~~
used to counteract the effects of CGRP. For example, CGRP(8-37) has been shown to reverse
the hypotension and tachycardia produced by administration of LPS to rats (Huttemeir, et al. *Am.*
J. Physiol. 265:H767-H769, 1993). In addition, CGRP(8-37) has some activity against amylin
(Gardiner et al. *Diabetes* 40:948-951, 1991). The affinity for CGRP(8-37) varies between
tissues. For example, data indicates that the affinity of CGRP(8-37) for mesenteric artery,
kidney, heart and skeletal muscle is somewhat higher than the affinity of CGRP(8-37) for
adipocytes and descending colon (Poyner, D. *Trends in Pharm. Sci.* 16:424-428, 1995). --

Please replace the paragraph beginning at page 10, line 15 with the following rewritten
paragraph. Per 37 C.F.R. §1.121, this paragraph is also shown in Appendix A with notations to
show the changes made.

-- Preferred adrenomedullin-derived antagonists include:

h-adrenomedullin (22-52) (SEQ ID NO:23)

A5
(TVQKLAHQIYQFTDKDKDNVAPRSKISPQGY-NH₂, Eguchi et al. *Endocrinol.*
135:2454-2458, 1994 and Champion et al. *Am. J. Physiol.* 272:R234-242, 1997). --

In the Claims

Please cancel claims 1-20, 27 and 28, without prejudice and amend claims 21 and 22.
The amended claims are provided below in clean form. In accordance with 37 C.F.R. §1.121,
amended claims are also shown in Appendix A with notations to indicate changes made.

2-21. (AMENDED) The method of Claim 29 wherein the CGRP receptor is on a cell.

A6 7-22. (AMENDED) The method of Claim 29 wherein the CGRP receptor is cell free.